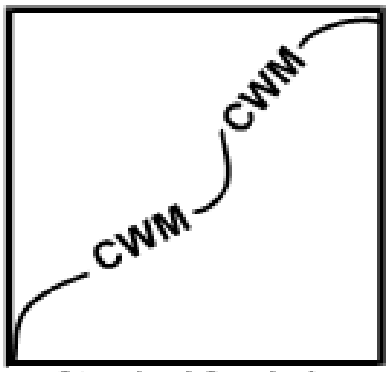
WM-9 CONCRETE WASTE MANAGEMENT

Refer to: ITD Standard Drawing P-5-B.



Standard Symbol

Definition and Purpose

These procedures and practices are designed to minimize or eliminate the discharge of concrete waste materials to the storm drain systems or to watercourses.

BMP Objectives

- ☐ Perimeter Control
- ☐ Slope Protection
- ☐ Borrow and Stockpiles
- ☐ Drainage Areas
- ☐ Sediment Trapping
- ☒ Stream Protection
- ☐ Temporary Stabilizing
- ☐ Permanent Stabilizing

Appropriate Applications

Concrete waste management procedures and practices are implemented on construction projects where:

- Concrete or mortar is used as a construction material or where concrete dust and debris result from demolition activities.
- Slurries containing portland cement concrete (PCC) or asphalt concrete (AC) are generated, such as from saw cutting, coring, grinding, grooving, and hydro-concrete demolition.
- Concrete trucks and other concrete-coated equipment are washed on-site. See also NS-8 (Vehicle and Equipment Cleaning).
- Where mortar-mixing stations exist.

Limitations

Site may constrain location of an appropriate washout area.

General Considerations

- Employees, subcontractors, and suppliers shall be educated on the concrete waste management techniques described herein.
- The Contractor's WPCM shall oversee and enforce concrete waste management procedures.

Concrete Slurry Wastes

- PCC and AC waste shall not be allowed to enter storm drains or watercourses.
- PCC and AC waste shall be collected and properly disposed of outside the highway right-of-way in conformance with the Standard Specifications or placed in a temporary concrete washout facility. See also NS-3 (Paving and Grinding Operations) and WM-11 (Liquid Waste Management).
- Disposal of hardened PCC and AC waste shall be in conformance with the Standard Specifications.
- A sign shall be installed adjacent to each temporary concrete washout facility to inform concrete equipment operators to utilize the proper facilities.
- A foreman and/or construction supervisor shall monitor on-site concrete working tasks, such as saw cutting, coring, grinding, and grooving to ensure proper methods are implemented.
- Saw-cut PCC slurry shall not be allowed to enter storm drains or watercourses. See also NS-3 (Paving and Grinding Operations) and WM-11 (Liquid Waste Management). Residue from grinding operations shall be picked up by means of a vacuum attachment to the grinding machine. Saw cutting residue shall not be allowed to flow across the pavement and shall not be left on the surface of the pavement.
- Slurry residue shall be vacuumed, disposed in a temporary facility (as described in On-Site Temporary Concrete Washout Facility, Concrete Transit Truck Washout Procedures, below), and allowed to dry. Dry slurry residue shall be disposed in accordance with WM-6 (Solid Waste Management), or, for on-site disposal, in accordance with the Standard Specifications.
- Residue from grooving and grinding operations shall be collected and disposed in accordance with the Standard Specifications.

On-Site Temporary Concrete Washout Facility, Concrete Transit Truck Washout Procedures

- Temporary concrete washout facilities shall be located a minimum of 50 feet from storm drain inlets, open drainage facilities, and watercourses, unless determined infeasible by the Engineer. Each facility shall be located away from construction traffic or access areas to prevent disturbance or tracking.
- A sign shall be installed adjacent to each washout facility to inform concrete equipment operators to utilize the proper facilities. The sign shall be installed as shown on the plans and in conformance with the standard drawings.

- Temporary concrete washout facilities shall be constructed above grade or below grade at the option of the Contractor. Temporary concrete washout facilities shall be constructed and maintained in sufficient quantity and size to contain all liquid and concrete waste generated by washout operations.
- Temporary washout facilities shall have a temporary pit or bermed areas of sufficient volume to completely contain all liquid and waste concrete materials generated during washout procedures.
- Washout of concrete mixer trucks shall be performed in designated areas only.
- Concrete shall be washed only from mixer truck chutes into an approved concrete washout facility. Washout may be collected in an impermeable bag for disposal.
- Excess concrete shall be pumped in concrete pump bin back into concrete mixer truck.
- Concrete washout from concrete pumper bins can be washed into concrete pumper trucks and discharged into designated washout area or properly disposed offsite.
- Once concrete wastes are washed into the designated area and allowed to harden, the concrete shall be broken up, removed, and disposed of per WM-6 (Solid Waste Management) and in conformance with the provisions in the Standard Specifications.

Temporary Concrete Washout Facility Type "Above Grade"

- Temporary concrete washout facility Type "Above Grade" shall be constructed, with a recommended minimum length and minimum width of 10 feet, but with sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations. The length and width of a facility may be increased, at the Contractor's expense, upon approval from the Engineer.
- Plastic lining material shall be a minimum of 10-millimeter polyethylene sheeting and shall be free of holes, tears, or other defects that compromise the impermeability of the material.
- Portable delineators shall be applied only to a clean, dry surface.

Temporary Concrete Washout Facility Type "Below Grade"

- Temporary concrete washout facility Type "Below Grade" shall be constructed, with a recommended minimum length and minimum width of 10 feet. The quantity and volume shall be sufficient to contain all liquid and concrete waste generated by washout operations. The length and width of a facility may be increased, at the Contractor's expense, upon approval of the Engineer. Lath and flagging shall be commercial type.
- Plastic lining material shall be a minimum of 10-millimeter polyethylene sheeting and shall be free of holes, tears or other defects that compromise the impermeability of the material.
- The soil base shall be prepared free of rocks or other debris that may cause tears or holes in the plastic lining material.

Removal of Temporary Concrete Washout Facilities

- When temporary concrete washout facilities are no longer required for the work, as determined by the Engineer, the hardened concrete shall be removed and disposed of in conformance with the provisions in the Standard Specifications. Disposal of PCC slurries or liquid waste shall be disposed of outside the highway right-of-way in conformance with provisions of the Standard Specifications. Materials used to construct temporary concrete washout facilities shall become the property of the Contractor, shall be removed from the site of the work, and shall be disposed of outside the highway right-of-way in conformance with the provisions of the Standard Specifications.
- Holes, depressions, or other ground disturbance caused by the removal of the temporary concrete washout facilities shall be backfilled and repaired.,

Maintenance and Inspection

Conduct inspections as required by the NPDES permit or contract specifications.